

# 1D Newton's Laws - Test Review

⚠ This is a preview of the published version of the quiz

Started: Oct 15 at 7:55am

## Quiz Instructions

### Question 1

1 pts

The weight of an egg near the surface of planet earth is approximately equal to how many newtons?

- 1
- 4
- 9.8
- 10
- none of these

### Question 2

1 pts

The slope of the graph of net force in newtons (y-axis) on an object and the mass of the object in kg (x-axis) is equal to the acceleration of the object.

- True
- False

**Question 3****1 pts**

A net force applied perpendicularly to the direction of an object's motion will not cause acceleration.

- True
- False

**Question 4****1 pts**

A car traveling at a constant velocity of 30 m/s has an acceleration of \_\_\_\_\_ m/s/s.

- 0
- 30
- 10
- 3

**Question 5****1 pts**

A block of mass 2 kg has an unbalanced force of 4 Newtons acting upon it. What is the acceleration of the block?

- 8 m/s/s
- 2 m/s/s
- 10 m/s/s
- 16 m/s/s
- 0 m/s/s

**Question 6****1 pts**

A block of mass 12 kg has an unbalanced force acting upon it for 5 seconds and experiences a 30 m/s change in velocity. What is the unbalanced force on the block in Newtons?

 72 2 60 15**Question 7****1 pts**

A block of mass 10 kg has an unbalanced force acting upon it for 4 seconds and experiences a 20 m/s change in velocity. What is the unbalanced force on the block in Newtons?

**Question 8****1 pts**

A block of mass 10 kg has an unbalanced force acting on it of 50 Newtons for 5 seconds. What is the change in velocity of the block in m/s?

**Question 9****1 pts**

1 Newton is equal to 1 \_\_\_\_.

- kg\*m/s
- M\*s/kg
- Kg\*m\*s
- s/(kg\*m)

**Question 10****1 pts**

A block of mass 10 kg had an unbalanced 30 Newton force acting on it. The change in velocity is 90 m/s for the time interval for which the force was applied. What was the time in seconds for which the unbalance for was applied?

- 3
- 9
- 30
- 1
- 16

**Question 11****1 pts**

An elevator of mass 450 kg is accelerating upward at 6 m/s/s on a planet where  $g = 10$  m/s/s. What is the tension in the elevator cable in Newtons?

- 7200
- 3600

4500 9000**Question 12****1 pts**

An elevator of mass 600 kg is accelerating upward at 3 m/s/s on a planet earth where  $g = 5$  m/s/s. What is the tension in the elevator cable in Newtons?

**Question 13****1 pts**

An elevator of mass 450 kg is accelerating upward on a planet where  $g = 10$  m/s/s. What is the acceleration in m/s/s if the tension in the cable is 13500 Newtons?

**Question 14****1 pts**

An elevator of mass 450 kg is accelerating downward on a planet where  $g = 10$  m/s/s. What is the magnitude of acceleration in m/s/s if the tension in the cable is 1000 Newtons?

**Question 15****1 pts**

An elevator of mass 550 kg is accelerating downward on a planet where  $g = 10 \text{ m/s}^2$ . What is the magnitude of acceleration in  $\text{m/s}^2$  if the tension in the cable is 1500 Newtons?

Quiz saved at 7:55am